In the Claims

1-11 (canceled)

12. (currently amended) A method of coating ~~method as recited in Claim 11 wherein the carbon depositing step includes~~ an electron impact surface of an anode with pyrocarbon, comprising:

coating the electron impact surface with a carbonizable resin;

carbonizing the resin to form a char;

directing a flow of hydrocarbon gas over the electron impact surface after heating the electron impact surface to at least 1000°C, to form a coating of pyrocarbon on the char; and

removing any residual water from the pyrocarbon coating.

13. (previously added) A coating method as recited in Claim 12 wherein the removing water step includes heating the anode to at least 100°C in a vacuum.

14. (currently amended) A coating method as recited in Claim ~~11~~ 12 wherein:

the carbonizable resin has volatile components; and

carbonizing the resin includes heating the anode to a temperature sufficient to decompose the resin and release the volatile components, whereby the char is left as a porous residue.

15. (previously added) A coating method as recited in Claim 14 wherein the carbonizing step includes heating the anode to a temperature of at least 700°C in a non-oxidizing atmosphere.

16. (previously added) A coating method as recited in Claim 15 wherein the carbonizable resin is a phenolic.

17-18 (canceled)

19. (previously added) A coating method as recited in Claim 14 wherein the heating step includes baking the anode in an oven providing a non-oxidizing atmosphere.

20-22 (canceled)